GLOBAL CONTINENTAL PALEOHYDROLOGY edited by K. J. Gregory, L. Starkel and V. R. Baker, John Wiley & Sons, Chichester, 1995. No. of pages: xii + 334. Price: £60.00 (hb). ISBN 0-471-95420-9.

This volume, which has been edited by three well-known experts in the field, is a contribution of GLOCOPH, the INQUA Commission on Global Continental Paleohydrology. The objective of the editors was to provide a background for further palaeohydrologic investigations on a global scale. The 14 chapters have been organized into three parts. The first part contains five chapters that provide information for individuals interested in palaeohydraulic research, global hydrology, rivers, ice sheets, lakes and the ability of humans to confound the record. The references provided by these chapters provide an excellent introduction to the various topics. For example, the 37-page Chapter 2 on fluvial and lacustrine paleohydrologic data (by Wohl and Enzel) contains 19 pages of references! The other chapters in the book provide valuable reference lists, although none quite as comprehensive as this.

Part 2 of the book contains five chapters that deal with the palaeohydrology of specific climatic zones, as follows: humid tropics, arid, semi-arid, temperate, polar and subpolar. These chapters will provide readers with a wealth of information on the climatic–hydrologic region in which they work.

The final, very short, Part 3 contains two chapters. The first deals with the development of a GLOCOPH database. The second chapter is only two pages long, but it sets forth a global palaeohydrologic research plan that stresses the following: linkage of data from diverse climatic regions, integration of information from diverse disciplines, development of a better understanding of the importance of time scales in palaeohydrology, and linkage of palaeohydrologic studies with global change programmes. These are certainly ambitious and worthwhile goals.

I recommend this book to hydrologists, geomorphologists and all scientists involved in global change. The book provides a ready means of entering the diverse literature relevant to climatic and hydrologic change, and it presents the hydrologist and engineer with the historical perspective that is necessary for prediction.

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PHOSPHORUS IN THE GLOBAL ENVIRONMENT: TRANSFERS, CYCLES AND MANAGEMENT (SCOPE 54) edited by H. Tiessen, John Wiley & Sons, Chichester, 1995. No. of pages: 462. Price: £50.00 (hb). ISBN 0-471-95691-0.

Phosphorus is a critical nutrient in many environments but it has a complex chemistry. Thus, the chapter in this book by Frossard and co-workers (Chapter 7) is especially welcome as it explains the details of the variety of phosphorus compounds and reactions in a most useful and comprehensible way. Readers interested in the environment but lacking a knowledge of phosphorus chemistry should turn to this chapter first.

All the other chapters are concerned with applied issues: agricultural use, food security, fertilizers, plant uptake, reclamation and those most important topics of the transfer from terrestrial to aquatic systems and their eutrophication. Environments included are agroecosystems, savannah, alley cropping, riparian sites, rivers, inland waters, catchments, estuaries, mangroves, near-shore and oceanic waters.

The book contains a subject index and researchers will be especially pleased that the references are integrated at the end of the book, rather than at the end of each chapter, which makes tracing the publications of first authors easy, even though there is no author index.

The objectives of the SCOPE project included assessments of the nature, sources, sinks and fluxes of P in the biosphere, the supply of biologically active P, tackling sustainable production without adverse effects on the environment, evaluating the environmental effects of P use and the transfers of P from terrestrial to aquatic environments, and the identification of gaps in knowledge. It has succeeded effectively in these objectives. The initial chapter contains a summary of the main conclusions, including the recommendation that the stress on the use of inorganic P should be replaced by management that involves organic recycling.

Internationally authored by some 40 authors in 20 chapters, this book is authoritative, meaty, diverse and interesting: it must be ‘the’ book of the moment on phosphorus. It succeeds because it covers the basic scientific principles, while also providing a ‘hands-on’ approach of direct use to management and policy makers.

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